

plex movements of the air constituting natural wind was below 10° , the indications of the different instruments were not comparable. Instruments of the Richard type give low figures, whilst the other types give too high readings.—M. **Pescara**: The results of some recent trials of a helicopter.—P. **Painlevé**: Remarks on the preceding communication.—M. **Marage**: The evolution of the graphical method.—L. and E. **Bloch**: The spark spectra of iron and cobalt in the extreme ultra-violet. Tables of the wavelengths of lines in the extreme ultra-violet are given between the limits $\lambda=1845$ and 1456 .—A. **Bigot**: Kaolins, clays, and bauxites. Variations of volume under the action of heat. The results with five materials are shown in a diagram. The changes in length of the briquettes were measured for each 100° rise of temperature up to the softening points of the materials.—M. **Barlot**: The electrical phenomena accompanying the displacement of metals.—M. **Ehrmann**: An important orogenic movement at the commencement of the Cretaceous period in the Kabylie des Babors.—J. **Thoulet**: The oceanic circulation and the density of sea-water. The density is rapidly determined by the dipping refractometer and the use of appropriate tables.—C. **Vaurabourg**: The density and refractive indices of sea-water. Tables are given showing the relation between the refractive index and density of sea-water for temperatures between 0° C. and 30° C. (5° intervals) and for densities ranging from 1.032 to 1.000.—G. **Kühnholtz-Lordat**: Dynamical phytogeography of the dunes of the Gulf of Lyons.—J. **Pavillard**: *Gymnodinium pseudonoctiluca*. This rare organism, discovered in 1884 by G. Pouchert, and again in 1890, was abundant in the Gulf of Lyons in 1907. It does not appear to be identical with the *Gymnodinium* found by Miss M. Lebour at Plymouth.—J. **Politis**: The brown corpuscles causing the browning of the vine. The brown corpuscles are not the cysts of a parasite (Debray) or excretion products (Viala and Sauvageau), but result from a transformation of granular mitochondria.—R. **Poisson**: Spermatogenesis and the exceptional chromosome in *Naucoris maculatus*.—A. **Paillet**: *Rôle* of the secretions in the extracellular destruction of micro-organisms in insects. Remarks on a recent communication of MM. Couvreur and Chaovitch.—R. **Bayeux**: The reducing power of the organic liquids and tissues of some marine animals. An application of the methylene-blue reduction method of H. Roger.—M. **Weinberg** and L. **Kepinow**: The leuco-agglutinines.

Books Received.

The Mechanical Principles of the Aeroplane. By Dr. S. Brodetsky. Pp. vii+272. (London: J. and A. Churchill.) 21s. net.

Mathematical Papers for Admission into the Royal Military Academy and the Royal Military College, and Papers in Elementary Engineering for Naval Cadets—ships and Royal Air Force for the Years 1911–20. Edited by R. M. Milne. (London: Macmillan and Co., Ltd.) 10s. 6d.

Mutations and Evolution. By Dr. R. Ruggles Gates. (New Phytologist Reprint, No. 12.) Pp. vii+118. (London: Wheldon and Wesley, Ltd.) 6s.

Meteorology: An Introductory Treatise. By Dr. A. E. M. Geddes. Pp. xx+390+xx plates. (London: Blackie and Son, Ltd.) 21s. net.

Telephotography. By Cyril F. Lan-Davis. Second edition by L. B. Booth. Pp. xii+116. (London: G. Routledge and Sons, Ltd.; New York: E. P. Dutton and Co.) 3s. 6d. net.

Fijian Society; or, The Sociology and Psychology

of the Fijians. By the Rev. W. Deane. Pp. xv+255. (London: Macmillan and Co., Ltd.) 16s. net.

Text-Book of Land Drainage. By Joseph A. Jeffery. (Rural Text-Book Series.) Pp. xx+256. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 10s. 6d. net.

Management of Dairy Plants. By Prof. M. Mortensen. Pp. xvi+358. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 12s. 6d. net.

The Practical Value of Ethnology. By Dr. A. C. Haddon. (Conway Memorial Lecture.) Pp. 64. (London: Watts and Co.) 1s. net.

The Backbone of Africa: A Record of Travel during the Great War. By Sir Alfred Sharpe. Pp. 232. (London: H. F. and G. Witherby.) 16s. net.

Sun, Sand, and Somals: Leaves from the Note-Book of a District Commissioner in British Somaliland. By Major H. Rayne. Pp. 223+12 plates. (London: H. F. and G. Witherby.) 12s. 6d. net.

Counsels and Ideals from the Writings of William Osler. Second edition. Pp. xxiv+355. (London: Oxford University Press.) 8s. 6d. net.

The Geology of the British Empire. By Dr. F. R. C. Reed. Pp. viii+480. (London: E. Arnold.) 40s. net.

Elements of Natural Science. By W. Bernard Smith. Part i. Pp. viii+207. (London: E. Arnold.) 5s. net.

The Modern Teacher: Essays on Educational Aims and Methods. Edited by A. Watson Bain. Pp. xv+272. (London: Methuen and Co., Ltd.) 10s. 6d. net.

Department of Scientific and Industrial Research: Fuel Research Board. The Winning, Preparation, and Use of Peat in Ireland. Reports and other Documents. Pp. 76. (London: H.M. Stationery Office.) 3s. net.

Department of Scientific and Industrial Research: Building Research Board. Special Report No. 1: Sand-Lime and other Concrete Bricks. By H. O. Weller. Pp. 11. (London: H.M. Stationery Office.) 3d. net.

The Carnegie Foundation for the Advancement of Teaching. Fifteenth Annual Report of the President and of the Treasurer. Pp. vi+171. (New York City.)

A Brief Account of Radio-Activity. By Prof. F. P. Venable. Pp. vi+54. (Boston: D. C. Heath and Co.; London: G. G. Harrap and Co., Ltd.) 3s. 6d. net.

Experimental Organic Chemistry. By Prof. Augustus P. West. (New-World Science Series.) Pp. xiii+460. (London: G. G. Harrap and Co., Ltd.) 10s. 6d. net.

Energétique générale. By Dr. Félix Michaud. Pp. vii+220. (Paris: Gauthier-Villars et Cie.) 10 francs.

Vergleichende Biologische Formenkunde der Fossilen niederen Tiere. By Prof. Edgar Dacque. Erste Hälfte. Pp. viii+336. (Berlin: Gebrüder Borntraeger.) 06 marks.

Human Physiology. By Prof. L. Luciani. Vol. v.: Metabolism—Temperature—Reproduction, etc. Pp. viii+422. (London: Macmillan and Co., Ltd.) 30s. net.

Diary of Societies.

THURSDAY, APRIL 28.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.
INSTITUTE OF PATHOLOGY AND RESEARCH (St. Mary's Hospital, Paddington), at 4.30.—Sir Almroth E. Wright: Acidosis and Acidemia, with Special Reference to Soury and Shock.
ROYAL SOCIETY, at 4.30.—Prof. H. Lamb and R. V. Southwell: The Vibrations of a Spinning Disc.—Dr. W. Rosenhain: The Hardness of Solid Solutions.—W. Hartree and Prof. A. V. Hill: A Method of Analysing Galvanometer Records.—F. H. Newman: A New Form of Wehnelt Interrupter.—T. L. Ibbs: Some Experiments on Thermal Diffusion.—B. N. Chak-

ravarty: The Diffraction of Light Incident at Nearly the Critical Angle on the Boundary between Two Media.
 BOTANICAL SOCIETY (Regent's Park), at 5.30.
 INSTITUTION OF ELECTRICAL ENGINEERS (at Institution of Civil Engineers), at 6.—Discussion on Tariffs.—J. R. Blaikie: Electricity Supply—Present Conditions and the Hopkinson Principles.—J. W. Beauchamp: Multi-Part Tariffs for Domestic Electricity Supply.
 CONCRETE INSTITUTE, at 7.30.—Prof. F. C. Lea: The Elastic Modulus of Concrete.
 ROYAL SOCIETY OF MEDICINE (Urology Section), at 8.30.—R. Thompson: Treatment of Epispadias and of Extroversion of the Bladder, with Some Remarks relating to their Origin and Anatomy.

FRIDAY, APRIL 29.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Prof. A. Keith: Demonstration on the Contents of the Museum.
 INSTITUTION OF ELECTRICAL ENGINEERS (Students' Section) (at City and Guilds (Engineering) College) (Annual General Meeting), at 6.30.—A. C. Warren: Radio-telegraphic Transmitting Apparatus.
 JUNIOR INSTITUTION OF ENGINEERS, at 8.—W. A. Tookey: Rambling Remarks on Expert Evidence.
 ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Sir Frank W. Dyson: Advances in Astronomy.

SATURDAY, APRIL 30.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—H. Y. Oldham: The Great Epoch of Exploration; (2) Spain.

MONDAY, MAY 2.

VICTORIA INSTITUTE (at Central Buildings, Westminster), at 4.30.—Rev. J. Gosset-Tanner: The Tripartite Nature of Man.
 ROYAL INSTITUTION OF GREAT BRITAIN, at 5.—Annual Meeting.
 ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Prof. S. G. Shatlock: Demonstration on Pathological Specimens in the Museum.
 SOCIETY OF ENGINEERS (INC.) (at Geological Society), at 5.30.—A. S. E. Ackermann: The Physical Properties of Clay (third paper).
 ARISTOTELIAN SOCIETY (at University of London Club), at 8.—Miss H. D. Oakeley: Prof. Driesch's Attempt to Combine a Philosophy of Knowledge and a Philosophy of Life.
 ROYAL INSTITUTE OF BRITISH ARCHITECTS, at 8.
 SOCIETY OF CHEMICAL INDUSTRY (at Chemical Society), at 8.
 ROYAL GEOGRAPHICAL SOCIETY (at Holian Hall), at 8.30.
 ROYAL SOCIETY OF MEDICINE (Tropical Diseases and Parasitology Section), at 8.30.—Dr. A. F. MacCallan: The Ankylostomiasis Campaign in Egypt, 1913-1915.—Sir Leonard Rogers: The Mortality and Prognosis of Cholera treated by the Author's Hyper-tonic Saline Method, based on 2000 Cases.

TUESDAY, MAY 3.

ROYAL HORTICULTURAL SOCIETY, at 3.
 ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. A. Keith: Darwin's Theory of Man's Origin in the Light of Present-Day Evidence.
 ROYAL SOCIETY OF ARTS (Indian Section), at 4.30.—W. Raitt: Paper-bulp Supplies from India.
 ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—H. S. Watkins: Colour Photography.
 ROYAL ANTHROPOLOGICAL INSTITUTE (at Royal Society), at 8.15.—J. Reid Moir: An Early Chellean Palaeolithic Workshop Site in the Pliocene Forest-bed of Cromer, Norfolk.

WEDNESDAY, MAY 4.

THE INSTITUTION OF CIVIL ENGINEERS, at 4.—Presentation of the Kelvin Medal to Dr. W. C. Unwin by the Right Hon. A. J. Balfour.
 ROYAL SOCIETY OF ARTS, at 4.30.—Sir Geoffrey Butler: Anglo-American Relations: A Personal Impression.
 GEOLOGICAL SOCIETY OF LONDON, at 5.30.—Miss I. A. MacDonald and Dr. A. G. Trueman: The Evolution of Certain Liassic Gastropods, with Special Reference to their Use in Stratigraphy.—H. Hamshaw Thomas: An Ottokaria-like Plant from South Africa.—Dr. A. B. Walkom: Nummulitespermum, gen. nov.: the Probable Megasporangium of Glossopteris.
 ENTOMOLOGICAL SOCIETY OF LONDON, at 8.
 INSTITUTE OF METALS (at Institution of Mechanical Engineers), at 8.—Prof. T. Turner: The Casting of Metals (Annual May Lecture).
 SOCIETY OF PUBLIC ANALYSTS AND OTHER ANALYTICAL CHEMISTS (at Chemical Society), at 8.—F. G. H. Tate and J. W. Pooley: Detection and Estimation of Illipe Nut Fat used as a Substitute for Cocoa Butter.—G. W. Monier Williams: Notes and Demonstration on Apparatus for determining Hydrogen Ion Concentration.—E. Paul: Note on the Oil of Oats.—H. Atkinson: Estimation of Potassium in Presence of Sodium, Magnesium, Sulphates, and Phosphates.

THURSDAY, MAY 5.

IRON AND STEEL INSTITUTE (Annual Meeting) (at Institution of Civil Engineers), at 10 and 2.30.—H. Brearley: The Welding of Steel in relation to the Occurrence of Pipe Blow Holes and Segregates in Ingots.—Dr. J. E. Stead: Solid Solution of Oxygen in Iron.—H. T. Ringrose: Scientific Control of Combustion.—J. E. Fletcher: Open-hearth and Other Slags—their Composition and Graphic Methods for determining their Constitution.—S. H. Fowles: Notes on the Cleaning of Blast-furnace Gas.
 ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Dr. C. S. Myers: Psychological Studies: (1) The Localisation of Sound.
 ROYAL SOCIETY, at 4.30.—Dr. H. Head: Release of Function in the Nervous System (Croonian Lecture).
 LINNEAN SOCIETY, at 5.—Prof. J. Stanley Gardiner: Reports on Collections from the Indian Ocean for Issue in the Society's

Forthcoming Transactions, vol. xviii.—E. R. Speyer: Insects in Relation to Reproduction in Coniferous Trees.—Prof. W. J. Dakin: The Collections from the Houtman Abrolhos Islands in 1913.

CHILD-STUDY SOCIETY (at Royal Sanitary Institute), at 6.—Miss F. E. Webb and Others: Individual Training in the School.
 INSTITUTION OF ELECTRICAL ENGINEERS (at Institution of Civil Engineers), at 6.—Discussion on Tariffs (continued).
 CHEMICAL SOCIETY, at 8.
 ROYAL SOCIETY OF MEDICINE (Obstetrics and Gynaecology Section), at 8.—Annual General Meeting.—H. Curtis: Angioma of the Vagina Spontaneously Evacuated.—Dr. A. E. Giles and Others: The Causes and Treatment of Sterility.

FRIDAY, MAY 6.

IRON AND STEEL INSTITUTE (Annual Meeting) (at Institution of Civil Engineers), at 10 and 2.30.—S. N. Brayshaw: The Prevention of Hardening Cracks, and the Effect of Controlling the Recalescence of a Tungsten Tool Steel.—Dr. J. Newton Friend: The Protection of Iron with Paint against Atmospheric Corrosion.—K. Honda, T. Matsushita, and S. Idei: The Cause of Quenching Cracks.—W. E. Hughes: Slip-lines and Twinning in Electro-deposited Iron.—A. Westgren: Röntgen Spectrographic Investigations of Iron and Steel.—J. H. Whiteley: Cupric Etching Effects produced by Phosphorus and Oxygen in Iron.
 ROYAL SOCIETY OF MEDICINE (Laryngology Section), at 4.45.—Annual General Meeting.
 ROYAL ASTRONOMICAL SOCIETY (Geophysical Discussion), at 5.—Sir Napier Shaw, Col. E. Gold, W. H. Dines, and F. J. W. Whipple: The Structure of the Atmosphere up to 20 kilometres. Chairman: Dr. G. C. Simpson.
 ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Sir Robert Robertson: War Developments of Explosives.

SATURDAY, MAY 7.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. E. C. C. Baly: Chemical Reaction.

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